DETAILED ACTION

This Office Action corresponds to application 10/650,363. Claims 1-25 and 27-72, now renumbered 1-71 have been allowed.

35 USC § 101

Claim 1 and depending claims 2-25 and 27-66 thereon comprise a system claim that is best interpreted as a hardware system. Specifically, Applicants claim a system containing, in part, a rule processor that is supported (e.g. Applicant's specification at paragraphs 0049 and 0065) as a pattern matching hardware structure coupled to search registers and further is referred to rule processing hardware. Therefore, the system is best seen as an apparatus with hardware structure rather than being construed as a program or software per se. Accordingly, the rule processor in claim 1 and depending claims 2-25 and 27-66 appear statutory under 35 U.S.C. 101.

Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Applicant's representative, Neal Berezny (Reg. No. 56,030) on 19 June 2008 and subsequently on 20 June 2008. Permission has been given to amend the following

claims 1-25, 27-66 (now claims 26-65) and 67 (now claim 66) as indicated by the underlined additions and ~~strikethrough~~ omissions. All other claims remain in their present form as per their submission dated 3/31/2008.

Claim 1 has been amended as:

Claim 1. A ~~rule processor~~ system for conducting contextual searches, the ~~processor~~ system comprising:

a rule processor comprising:

a plurality of M input payload search registers, wherein a data stream of content data to be searched is input into the plurality of payload search registers;

a search execution engine comprising:

a search array coupled to the plurality of M search registers, wherein the search array comprises:

a plurality of M rows of search array elements coupled to a plurality of M output match lines; and

a plurality of N columns of search array elements coupled to a plurality of N pattern input lines comprising a search pattern, wherein the search array comprises an array of M by N search array elements, and wherein the content data in the plurality of M search registers is ~~approximately~~ replicated and stored N times in the plurality of N columns in the search array, wherein the N content data in each column of the N columns are shifted in row positions relative to the row positions of the content data in each of the other columns of the N columns; and

a sorter coupled to the search array to perform one or more contextual searches on content in the search array via parallel pattern matching in response to executing one or more search instructions specifying the one or more pattern searches and presenting one or more patterns to the content, wherein the parallel pattern matching comprises performing a simultaneous search within all M rows for all of the N search pattern elements input by the N pattern input lines, all in one clock period.

Claims 2-25 and 27-66:

Please also amend depending **claims 2-25 and 27-66** (now 26-65) to recite, in the first line, **"The system defined"** rather than "The rule processor defined". Further note that claim 47 (now claim 46) is amended to read "The system of claim 1" rather than "The rule processor of claim 1" in the first line.

Claim 14 has been amended as:

Claim 14. The ~~rule processor~~ system defined in Claim 12 wherein a value to which the pointer points is a result of a previously performed search by ~~the~~ a search execution hardware.

Claim 66 has been amended as:

A process comprising:

loading a set of input payload search registers with content data;

storing a replication of the content data in the payload search registers in a search array coupled to the registers, wherein the search array comprises:

a plurality of M rows of search array elements coupled to a plurality of M output match lines; and

a plurality of N columns of search array elements coupled to a plurality of N pattern input lines comprising a search pattern, wherein the search array comprises an array of M by N search array elements, and wherein the storing of the replication of content comprises ~~approximately~~ replicating and storing the content in the M input payload search registers a plurality of times, in the plurality of N columns of search array elements, wherein the N content data in each column of the N columns are shifted in row positions relative to the row positions of the content data in each of the other columns of the N columns;

presenting by means of the plurality of N pattern input lines a pattern identified by a search instruction to be searched in the search registers;

performing parallel pattern matching between the pattern and the content stored in the search array, wherein the parallel pattern matching comprises performing a search query simultaneously within all M rows for all of the N search pattern elements input by the N pattern input lines, all in one clock period; and

outputting by means of the plurality of M output match lines an indication of a result of performing the pattern matching.

Allowable Subject Matter

Claims 1-25 and 27-72, now renumbered claims 1-71 are allowed.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

The closest prior art of record appear to neither teach nor suggest all the limitations of the claimed invention singly or in combination. Specifically, Lee (U.S. Patent 5,060,143) and Messenger et al. (U.S. Patent 5,051,947) as being the closest prior art found, do not teach the limitations (as per claim 1) a plurality of N columns of search array elements coupled to a plurality of N pattern input lines comprising a search pattern, wherein the search array comprises an array of M by N search array elements, and wherein the content data in the plurality of M search registers is replicated and stored N times in the plurality of N columns in the search array, wherein the N content data in each column of the N columns are shifted in row positions relative to the row positions of the content data in each of the other columns of the N columns as well as the limitation of wherein the parallel pattern matching comprises performing a simultaneous search within all M rows for all of the N search pattern elements input by the N pattern input lines, all in one clock period in combination. Claims 67 and 71 contain the same subject matter and appear novel for the same reasons.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT TIMBLIN whose telephone number is (571)272-5627. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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